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NATIONAL WILDLIFE FEDERATION

1412 Sixteenth Street, N.W., Washington, D.C. 20036

202-797-6800

February 19, 1985

The Honorable Michael DeLand
Regional Administrator
U.S. Environmental Protection
Agency
Region I
John F. Kennedy Federal Building
Room 2203
Boston, Massachusetts 02203

RECEIVED

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REGION I
OFFICE OF THE
REGIONAL ADMINISTRATOR

Dear Mr. DeLand:

The purpose of this letter is to call to your attention an uncontrolled hazardous waste site, located within 10 miles of the heart of Boston, at which many thousands of toxic chemical-containing drums were dumped for nearly six decades. And, although this site is included on EPA's "ERRIS" list inventory (Site Name: "Safety Projects and Engineering"; EPA I.D. No.: MAD980520399) of potential Superfund sites, to our knowledge, not even a "preliminary assessment" has been made of the status of this site and the potential hazard it may pose to Boston area residents and others. The fact that the site is under 50 fathoms (300 feet) of water and is 8 miles offshore (i.e., 9.3 nautical miles northeast of Boston Lightship) in no way lessens the potential hazard posed by the accumulated drums. As was recognized by an EPA Region I Memorandum in 1976 (from T.E. Landry, Ocean Dumping Coordinator, to Edward J. Conley, Chief, Permits Branch, August 23, 1976), steel drums, even when encased in concrete, "will ultimately fail, exposing the environment to the materials within," and should be treated "only as a means of transportation with no life expectancy when [they] reach the ocean floor." One need not look beyond New Bedford Harbor for dramatic evidence that hazardous substances on the seabed (in that case, PCBs) can--and do--come back to harm us.

we urge EPA to do the following: (1) undertake or commission an immediate survey of the number and condition of steel drums on and beneath the surface of the ocean bottom at

The Honorable Michael DeLand
February 19, 1985
Page 2.

the Safety Projects and Engineering Site (also known as the "Foul Dumping Area," a circular site about 2 nautical miles in diameter, the center of which is located at the intersection of lines bearing 56° true from Boston Lightship and 112° true from Marblehead Light); (2) formally evaluate this site pursuant to the Hazard Ranking System established under the Superfund National Contingency Plan for possible inclusion on the National Priorities List (NPL); (3) take whatever emergency removal and/or stabilization actions may be required in accordance with Section 104(a)(1) of Superfund "to protect the public health or welfare or the environment" from the release or substantial threat of release into the environment of any hazardous substance or of any pollutant or contaminant; (4) if the site is subsequently listed on the NPL, take any additional longer-term remedial response action which may be necessary and appropriate; (5) initiate a responsible party search to determine whether financially viable contributors to the wastes deposited at the site still exist; and (6) initiate immediate coordination with the New England Division of the U.S. Army Corps of Engineers to terminate the ocean disposal of dredged material at the Foul Dumping Area--to the extent such continuing dumping may impede efforts to adequately survey and remedy the problem created by past chemical waste dumping at this site.

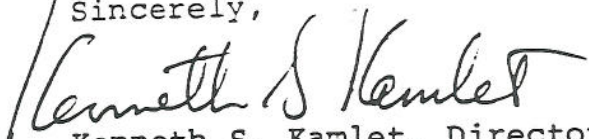
Since EPA Headquarters is actively considering candidates for inclusion on updates to the National Priorities list, we hope you will initiate and complete an evaluation of this site as soon as possible. To the extent that present Hazard Ranking System evaluation criteria are inadequate to fully assess the health and environmental hazards posed by an underwater and offshore site of this kind--where the principal threats to human health would most likely be associated with the consumption of contaminated fish and shellfish--it is important that this be determined as quickly as possible. As you know, Congress has begun to consider reauthorization of the Superfund law and might well be interested in learning of deficiencies in the current Hazard Ranking System which could be rectified legislatively.

I have assembled additional background information in the Attachment to assist you in your evaluation. If you would advise me within the next 30 days as to your proposed plan of action in response to this letter, I would be most appreciative.

The Honorable Michael DeLand
February 19, 1985
Page 3.

Thank you for your attention to this matter.

Sincerely,


Kenneth S. Kamlet, Director
Pollution & Toxic Substances
Division

Attachment

cc: The Honorable James S. Hoyte
Secretary, Executive Office of
Environmental Affairs

Paul G. Keough
Deputy Regional Administrator

Merrill S. Hohman, Director
Waste Management - EPA, Region I

Honorable Michael S. Dukakis
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James Gutensohn, Commissioner
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William Cass, Director
Hazardous Waste - Department of
Environmental Quality Engineering

Walter E. Bickford, Commissioner
Department of Fisheries, Wildlife
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The Honorable Michael DeLand
February 19, 1985
Page 4.

cc's: (cont'd)

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Robert H. Gardiner
NWF Regional Director - New England

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Wayne Davis, Secretary
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Dr. Kahlil Boghdan, Editor
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ATTACHMENT

Safety Projects & Engineering ("Foul Dumping Area") Dumpsite: Relevant Background Information

1. Safety Projects and Engineering, Inc. (SPE), located at 3 Malden Street, W. Quincy, Massachusetts, was (it may or may not still exist) a waste disposal firm. They styled themselves "Dealers in Safety Services" and "Decontamination Work and Hazardous Materials Disposal," involved in the general business of "removing hazardous waste chemicals from hospitals, schools and industry." During the period from at least 1963 through 1976, SPE routinely ocean-dumped "miscellaneous chemical" and other wastes at the Foul Dumping Area site, centered about 9.3 nautical miles northwest of Boston Lightship. According to SPE, unnamed "predecessors" engaged in the same practice for an additional forty-six (46) years (i.e., back to 1917?). From November 20, 1973, through some point in 1976 or 1977, these disposal activities took place pursuant to Ocean Dumping permits issued by EPA Region I. On September 24, 1976--in response to a National Wildlife Federation "Notice of Intent to Sue" (dated July 8, 1976) unless SPE's permit was modified to preclude the ocean dumping of toxic pollutants legally barred from such disposal under the Marine Protection, Research, and Sanctuaries Act and the London Dumping Convention--then Region I Administrator, John A.S. McGlennon agreed to limit further SPE ocean dumping approvals to alkali .. metals and explosives and to deny further dumping approval for "miscellaneous laboratory chemicals." NWF is not aware of how long SPE continued to ocean-dump under the terms of this restriction.

2. During the 2-year period from November 20, 1973 through November 15, 1974, and from June 24, 1975 through June 20, 1976, SPE ocean-dumped a total of 933 containers (in the form of 55-gallon steel drums, or 55-gallon drum-equivalents), containing an estimated 4,849 gallons of material. Of this total, 223 drums (containing an estimated 669 gallons) represented "Miscellaneous Chemicals." Another 76 drums (4,180 gals.) contained "Solvents, Acid, Bases." As noted in SPE's 1976 permit application, "the volume of materials being ocean dumped in our operation has been significantly reduced in recent years, principally in organic matter and solvents." Accordingly, during SPE's 13 years of active operation, it is likely that well over a thousand drums of "Miscellaneous Chemicals" had been ocean-dumped. Forty-six years of additional operations by SPE's predecessors undoubtedly contributed thousands of additional drums to this site.

3. The "Miscellaneous Chemicals" category encompasses "miscellaneous laboratory reagents, products and by-products of normal laboratory operations." Laboratory reagents and by-products were typically encased in concrete in 55-gallon drums so that each drum contained approximately 12 pounds of waste chemicals. Prior to 1976, these materials were frequently encapsulated in smaller containers--as long as their total volume did not exceed the equivalent volume of 55-gallon drums authorized for dumping by SPE's ocean dumping permits. Each container was required to have a minimum density of 70 lbs. per cubic foot (presumably, to minimize the likelihood of their being carried away by currents from the disposal site). At least during the period SPE's dumping occurred pursuant to EPA permit all containers were required to be "clearly and legibly marked" in large letters using marine paint to include the legend "SAFETY PROJECTS, W. Quincy," a code number unique to each container, and the month and year of the dumping. For the containers dumped during 1976, those containing "Miscellaneous Chemicals" included Nos. 1, 7, 11, 15, 114-124, 140-41, 161-174, and 175-189. Since EPA required SPE to submit periodic waste manifests, showing the identity, quantity, and source of wastes present in each coded container, records should exist in EPA Region I files to permit EPA--as permit of a site assessment--to determine the condition of specific drums containing the most hazardous chemicals and also to determine the source of such chemicals. (Note that this is probably true only for drums dumped since 1973).

4. Although the quantities of any particular chemical in any given container or dump were small (e.g., ranging from 1 ounce to 5 pounds for the most toxic chemicals), the toxicity, persistence, and bioaccumulation potential of many of the manifested chemicals is great. For example, a single SPE manifest for the month of February, 1976, included 21 chemical compounds identified on HEW's 1973 "Toxic Substances List" as known carcinogenic, neoplastic, mutagenic, or teratogenic agents in 1 or more animal species or in humans. The same manifest also included 25 toxic halogenated organic compounds and numerous toxic heavy metal compounds. Various manifests include highly toxic and bioaccumulative phthalate compounds (e.g., phthalate anhydride; bromoethyl phthalate; and butyl phthalate), as well as moderately bioaccumulative compounds with genotoxic and hepatotoxic properties (e.g., aniline, p-nitroaniline, N, N-dimethyl aniline, p-phenylenediamine, N,N-dimethyl-p-phenylenediamine ethylenediamine, and 1,2-dibromoethane (also known as "EDB")). It should be noted that many compounds found in SPE containers which, if released into seawater by themselves, would be unlikely to find their way into the tissues of edible fish and shellfish, may well be subject to bioaccumulation and food chain contamination, when released into the environment in association with other, more hydrophobic materials also present in SPE containers. Moreover, given the ocean bottom location of these drums, adsorption of contaminants onto particles of bottom sediments, can provide another route of potential human exposure (even for otherwise poorly bio-

accumulated compounds) by way of bottom-feeding fish and invertebrates. Despite the fact that the Foul Area site is officially off-limits to commercial fishing, mobile species--including those actively fished and consumed up and down the coast--are obviously free to move in and out of (and to feed at) the site.

5. In a September 30, 1976, letter to Regional Administrator McGlennon (congratulating EPA on its decision to restrict SPE's continued ability to ocean-dump), NWF Executive Vice President, Thomas L. Kimball, urged that "an effort...be made (or at least, its feasibility actively explored) to recover as many as possible of the previously dumped drums of toxic chemicals which, if they are left on the ocean bottom, will continue to threaten serious consequences for many years to come...." Mr. Kimball also urged the Regional Administrator "to give priority attention to investigating and hopefully resolving the problem of laboratory and hospital waste disposal throughout New England" for which a coherent management policy and program was and remains lacking and desperately needed. No response was ever received to these recommendations. To our knowledge, no action was forthcoming to implement them. They remain critical needs.

6. Although SPE's ocean dumping of containerized hazardous wastes at the Foul Dumping Area site ended 8 or 9 years ago, the New England Division of the U.S. Army Corps of Engineers continues to dump (and approve dumping of) dredge spoils at this same site, Little if any monitoring or surveillance of the ocean bottom at the dumpsite has occurred under EPA auspices either before, during or after SPE's dumping. The New England Division of the Corps has, however, conducted a limited amount of dredged material-oriented monitoring at the Foul Dumping Area site in recent years (as part of its "DAMOS" project). Some of these studies have included the use of side-scan sonar which may have the capability of detecting buried drums on the sea bottom. In June of 1976, Dr. Thomas Gilbert of the New England Aquarium told NWF that he had obtained side-scan sonar reflections which "might be drums." EPA should review more recent side-scan and other monitoring data at the site--obtainable from the New England Division--to help it map out a "plan of attack."

7. Although the repeated deposition of thousands of cubic yards of dredged material atop the previously dumped drums at the Foul Dumping Area site might seem to provide some measure of protection against the uptake into the foodchain of waste drum contents, Dr. Gilbert pointed out to NWF in 1976 that the reducing character of bottom sediments might lower the benthic pH (i.e., increase its acidity) through the oxidation of sulfides which might

in turn increase the solubility of the cement in SPE's drums (i.e., making it easier for the contents to escape). Moreover, the dumping of dredged materials contaminated with organic matter could actually increase the biological availability of drum contents. Many of the toxic chemicals in the drums would tend to bind to organic particles and be subject to more ready uptake by deposit-feeding organisms. It is important, therefore, for EPA and the Corps of Engineers to reassess the continued advisability of allowing dredged material to be dumped at the Foul Dumping Area site.